

2023

M.Sc.

4th Semester Examination

COMPUTER SCIENCE

PAPER : COS-403A & 403B

Full Marks : 50

Time : 2 hours

The figures in the right-hand margin indicate marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Illustrate the answers wherever necessary.

*Answer from any **one** Section.*

SECTION—I

(403A : INFORMATION SECURITY)

Answer from **all** the Groups as directed.

GROUP—A

Answer *any* **four** questions from the following :

2×4=8

1. What is digital signature?

(2)

2. What do you mean by intrusion detection?
3. What are packet sniffers?
4. What do you mean by computer forensics?
5. What is Sandbox?
6. Write the uses of cookies.

GROUP—B

Answer *any four* questions from the following :

4×4=16

7. Describe the procedure of computer forensics. 4
8. Describe IDS Control Strategies. 4
9. Write appropriate measures for intrusion detection. 4
10. Write the functions of honeypot. 4
11. Write the importance of information security. 4
12. Write advantages and disadvantages of computer forensics. 4

GROUP—C

Answer *any two* questions from the following :

8×2=16

13. What is OPSEC? How do you identify threats and vulnerabilities?
14. Describe building blocks of a secure system.
15. Describe a typical session with Cookies.
16. Describe Cross Site Scripting (XSS).

[Internal Assessment : 10 marks]

(3)

SECTION—II

(403B : CLOUD COMPUTING)

Answer from **all** the Groups as directed.

GROUP—A

1. Answer *any four* questions from the following :

2×4=8

- (a) What is Cloud Computing?
- (b) What do you mean by 'Pay as you go' in cloud?
- (c) Write down the key challenges of cloud computing.
- (d) What is service-oriented computing?
- (e) What is Virtualisation?
- (f) Describe, in short, the need of distributed computing in cloud.

GROUP—B

2. Answer *any four* questions from the following :

4×4=16

- (a) Describe the vision of cloud computing.
- (b) Explain the architecture of cloud.

(4)

- (c) With the help of a diagram, explain the machine reference model of Virtualisation.
- (d) Explain two types of services provided by AWS.
- (e) Write a short note on Hadoop and Windows Azure.
- (f) Explain the role of grid and cluster computing in cloud.

GROUP--C

3. Answer *any two* questions from the following :
8×2=16

- (a) Briefly explain the Cloud reference model.
- (b) Describe the role of different components of IaaS management software.
- (c) What are the different types of cloud? Explain each of them.
- (d) What is Hypervisor? Explain the different types of Hypervisor.

[Internal Assessment : 10 marks]

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